CLAIMS

1. Magnetic transducer for measuring the flow of a fluid, the transducer having electrodes and an alternating magnetic field, wherein an electrode has lower noise energy at frequencies below 5Hz than an electrode comprising carbon or corrosion-resistant metal alloy and comprises a metal and a layer of a salt of that metal arranged such that it is interposed between the metal and the fluid, the layer being electrochemically deposited or sintered.

2. Magnetic transducer according to claim 1, wherein the layer of salt is sparingly soluble in said fluid the flow of which is to be measured.

3. Magnetic transducer according to claim 2, wherein the metal is silver.

4. Magnetic transducer according to claim 3, wherein the layer of salt comprises silver halide salt.

5. Magnetic transducer according to claim 4, wherein said silver halide salt is silver chloride or silver fluoride.

6. Magnetic transducer according to claim 1, wherein the thickness of the layer is such that the impedance of the electrode is at a minimum.

7. Magnetic transducer according to claim 1, wherein the surface of the electrode is roughened so as to increase its active area.

8. Magnetic transducer according to claim 7, wherein the layer is partially reduced back to metal.

9. Magnetic transducer according to claim 1, wherein a pair of electrodes of the magnetic transducer are balanced so as to minimise the offset potential between the two.

10. Magnetic transducer according to claim 1 and comprising means for generating the alternating magnetic field, said means exhibiting magnetic remenance.

11. Flow meter incorporating a magnetic transducer according to claim 1.

12. Flow meter according to claim 11, wherein the meter is battery-powered.

13. Magnetic transducer for measuring the flow of a fluid, the transducer having electrodes and an alternating magnetic field, wherein an electrode has a noise characteristic at magnetic field frequencies around 1 Hz that is lower than that of an electrode comprising carbon or corrosion-resistant metal alloy and comprising a metal and a layer of a salt of that metal arranged such that it is interposed between the metal and the fluid, the layer being electrochemically deposited or sintered.

14. Magnetic transducer according to claim 13, wherein the layer of salt is sparingly soluble in said fluid the flow of which is to be measured.

15. Magnetic transducer according to claim 14, wherein the metal is silver.

16. Magnetic transducer according to claim 15, wherein the layer of salt comprises silver halide salt.

17. Magnetic transducer according to claim 16, wherein said silver halide salt is silver chloride or silver fluoride.

18. Magnetic transducer according to claim 13, wherein the thickness of the layer is such that

the impedance of the electrode is at a minimum.

19. Magnetic transducer according to claim 13, wherein the surface of the electrode is roughened so as to increase its active area.

20. Magnetic transducer according to claim 19, wherein the layer is partially reduced back to metal.

21. Magnetic transducer according to claim 13, wherein a pair of electrodes of the magnetic transducer are balanced so as to minimise the offset potential between the two.

22. Magnetic transducer according to claim 13 and comprising means for generating the alternating magnetic field, said means exhibiting magnetic remenance.

23. Flow meter incorporating a magnetic transducer according to claim 13.

24. Flow meter according to claim 23, wherein the meter is battery-powered.

25. Magnetic transducer for measuring the flow of a fluid, the transducer having electrodes and an alternating magnetic field, wherein an electrode has lower noise energy at frequencies below 5Hz than an electrode comprising carbon or corrosion-resistant metal alloy and comprises a metal and a layer of a salt of that metal arranged such that it is interposed between the metal and the fluid, the layer being partially reduced back to metal.

26. Magnetic transducer according to claim 25, wherein the layer of salt is sparingly soluble in said fluid the flow of which is to be measured.

27. Magnetic transducer according to claim 26, wherein the metal is silver.

28. Magnetic transducer according to claim 27, wherein the layer of salt comprises silver halide salt.

29. Magnetic transducer according to claim 28, wherein said silver halide salt is silver chloride or silver fluoride.

30. Magnetic transducer according to claim 25, wherein said layer is electrochemically deposited.

31. Magnetic transducer according to claim 25, wherein said layer is sintered.

32. Magnetic transducer according claim 25, wherein the thickness of the layer is such that the impedance of the electrode is at a minimum.

33. Magnetic transducer according to claim 25, wherein a pair of electrodes of the magnetic transducer are balanced so as to minimise the offset potential between the two.

34. Magnetic transducer according to claim 25 and comprising means for generating the alternating magnetic field, said means exhibiting magnetic remenance.

35. Flow meter incorporating a magnetic transducer according to claim 25

36. Flow meter according to claim 35, wherein the meter is battery-powered.

37. Magnetic transducer for measuring the flow of a fluid, the transducer having electrodes and an alternating magnetic field, wherein an electrode has a noise characteristic at magnetic field frequencies around 1 Hz that is lower than that of an electrode comprising carbon or corrosion-resistant metal alloy and comprise a metal and a layer of a salt of that metal arranged such that it is interposed between the metal and the fluid, the layer being partially reduced back

to metal.

38. Magnetic transducer according to claim 37, wherein the layer of salt is sparingly soluble in said fluid the flow of which is to be measured.

39. Magnetic transducer according to claim 38, wherein the metal is silver.

40. Magnetic transducer according to claim 39, wherein the layer of salt comprises silver halide salt.

41. Magnetic transducer according to claim 40, wherein said silver halide salt is silver chloride or silver fluoride.

42. Magnetic transducer according to claim 37, wherein said layer is electrochemically deposited.

43. Magnetic transducer according to claim 37, wherein said layer is sintered.

44. Magnetic transducer according claim 37, wherein the thickness of the layer is such that the impedance of the electrode is at a minimum.

45. Magnetic transducer according to claim 37, wherein a pair of electrodes of the magnetic transducer are balanced so as to minimise the offset potential between the two.

46. Magnetic transducer according to claim 37 and comprising means for generating the alternating magnetic field, said means exhibiting magnetic remenance.

47. Flow meter incorporating a magnetic transducer according to claim 37

48. Flow meter according to claim 47, wherein the meter is battery-powered.